



## Datasheet

# Water Loop Controller (PL-C1050-WLC)

## Description

The Prolon C1050 WLC water loop controller is designed to control a water loop system comprised of a boiler and a water tower with an internal pump. The built-in microprocessor offers precise digital control to maximize performance. The available control sequences are fully configurable, either locally or remotely with free software. The C1050 offers a variety of functions such as bypass valve control, cooling tower damper control and more.

## Features

- Controls a boiler and water tower with internal pump based on supply temperature
- Bypass valve controlled by return temperature
- Up to 2 water tower (cooling) stages, one of which can be modulating
- Water tower damper sequence also available
- Stand-alone or networked (up to 127 nodes)
- Remote configuration and visualization with FREE Prolon Focus software
- 4 digital outputs and 1 analog output equipped with resettable fuses

## Technical Specifications

- **Supply:** 24 VAC  $\pm$ 10%, 50/60 Hz, Class 2
- **Power:** 2 VA (consumption), 32 VA (input)
- **Inputs:** Supply water temp – thermistor 10K  
Return water temp – thermistor 10K  
Auxiliary temp – thermistor 10K  
Auxiliary digital input – dry contact
- **Digital outputs:** 4 triac outputs, 10-30 VAC source or dry contact, 300 mA max (resettable fuse)
- **Analog output:** 1 output 0-10 VDC, 40 mA max (resettable fuse)
- **Indication lights (LED):** State of each output / Communication / Power / State of microprocessor
- **Microprocessor:** PIC18F6722, 8 bits, 40 MHz, 128KB FLASH memory
- **Casing:** Molded ABS, UL94-HB
- **Communication:** Modbus RTU (RS485), up to 127 nodes
- **Baud Rates:** 9600, 19200, 38400, 57600, 76800, 115200
- **Connection:** Removable screw-type terminal blocks (max 16 AWG)
- **Dimensions:** 6.2" x 5.2" x 2.5" (157mm x 132mm x 64mm)
- **Weight:** 0.85 lbs (0.39 kg)
- **Environment:** -4 to 122 °F (-20 to 50 °C) Non-Condensing
- **Certification:** UL916 Energy Management Equipment, CAN / CSA-C22.2, FCC part 15: 2012 class B, RoHS